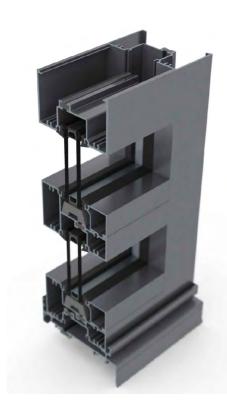


#### **U-MAX™** 100 Centre Double Glazed - 34mm Pocket



#### **FEATURES:**

- 100mm Frame Depth
- 60mm Sight Line generally
- Optional Low profile 44mm Outer Frame
- Glass Plane-Centred
- Compatible with 100mm Front Glazed allowing glass in different planes
- Designed for Thermal Break Applications
- Can be offered Non-broken to maintain visual unity
- Compatible with other 100mm U-MAX framing systems
- Accepts 24mm to 28mm IGU's
- Single Glazed Spandrel adaptor option
- Eliminates ugly visible drain slots in the face of transoms
- Can be Internal or External glazed
- Awning & Casement sash options
- Truth Awning & Casement options
- Tilt & Turn Sash
- Multi Locking Awning & Casement options
- Sliding Window
- U-Max Sliding door compatible
- U-Max Bifold Door compatible
- Hinged, Pivot, Sliding & Multi sliding door tracks
- Dry Glazed with High performance Santoprene Gaskets o Anti Stretch Gaskets
  - o Anti-Dropout Gasket Design
- Suited to wet glazed if preferred
- Watershed -Concealed Transom drainage system

#### **FABRICATION:**

- Easy Screw Flute Joinery Fabrication
- Simple Panelized Assembly

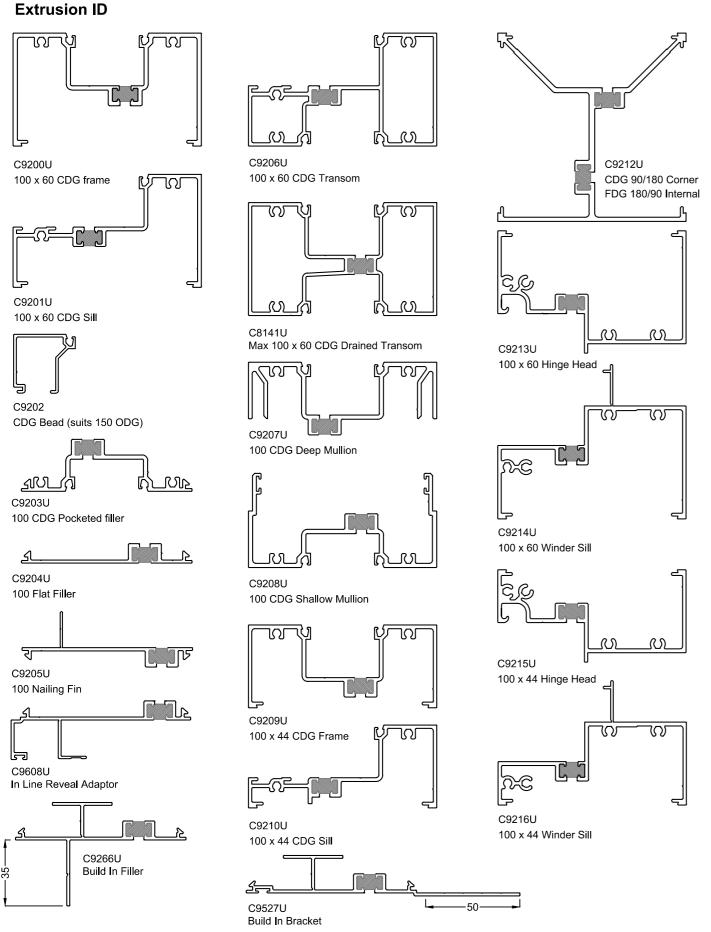
#### **PRODUCT APPLICATIONS:**

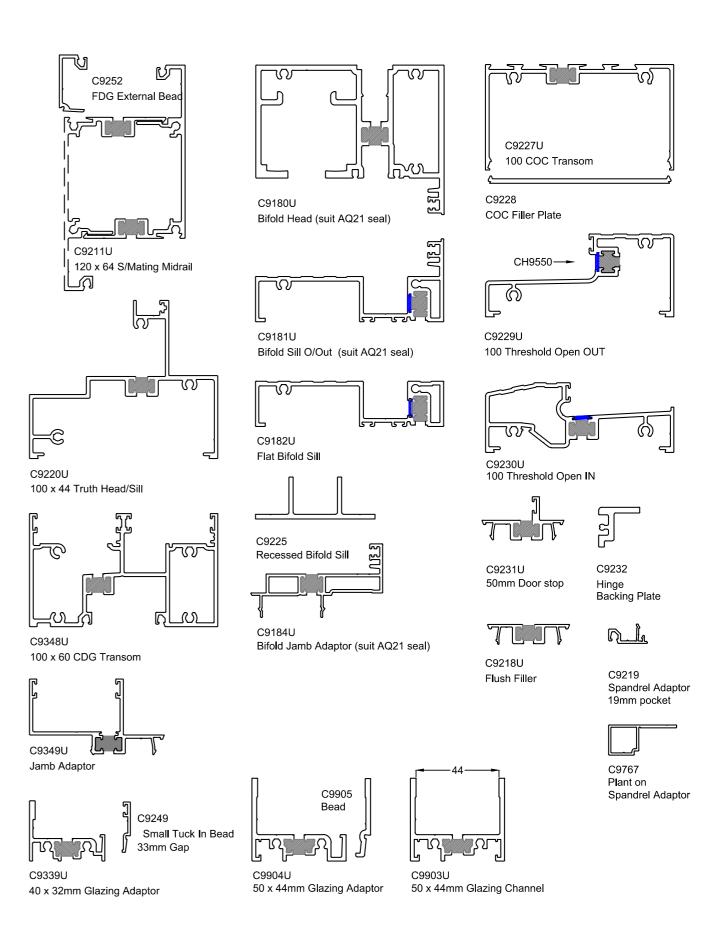
- Shopfront, Ribbon Windows or Punched Openings
- Generally Single Span, limited to 6.5 metre high applications

**Thi**s system may also be ordered without polyurethane filled cavities for non-thermal applications & is completely compatible with other Max framing systems







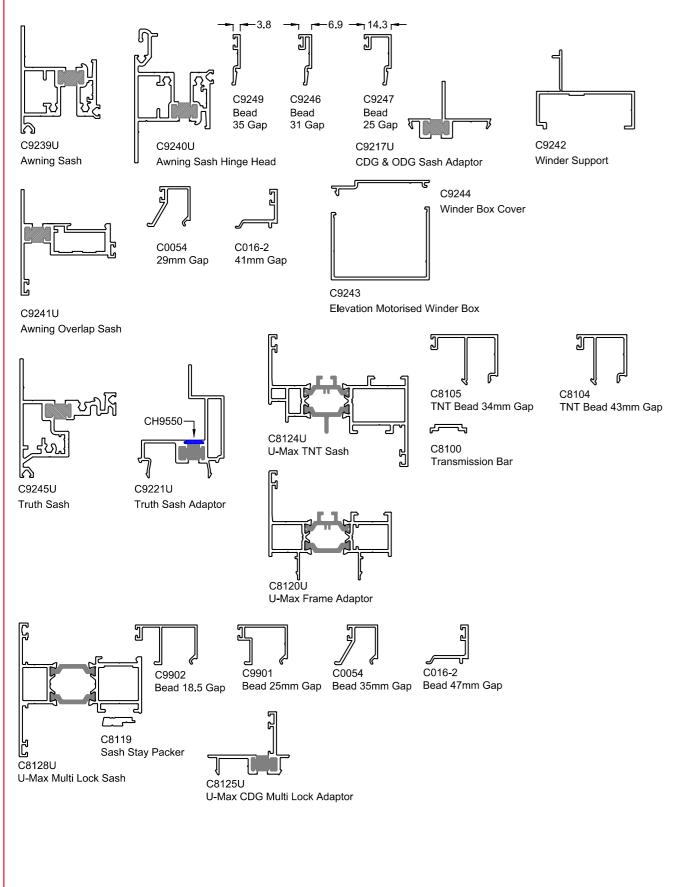


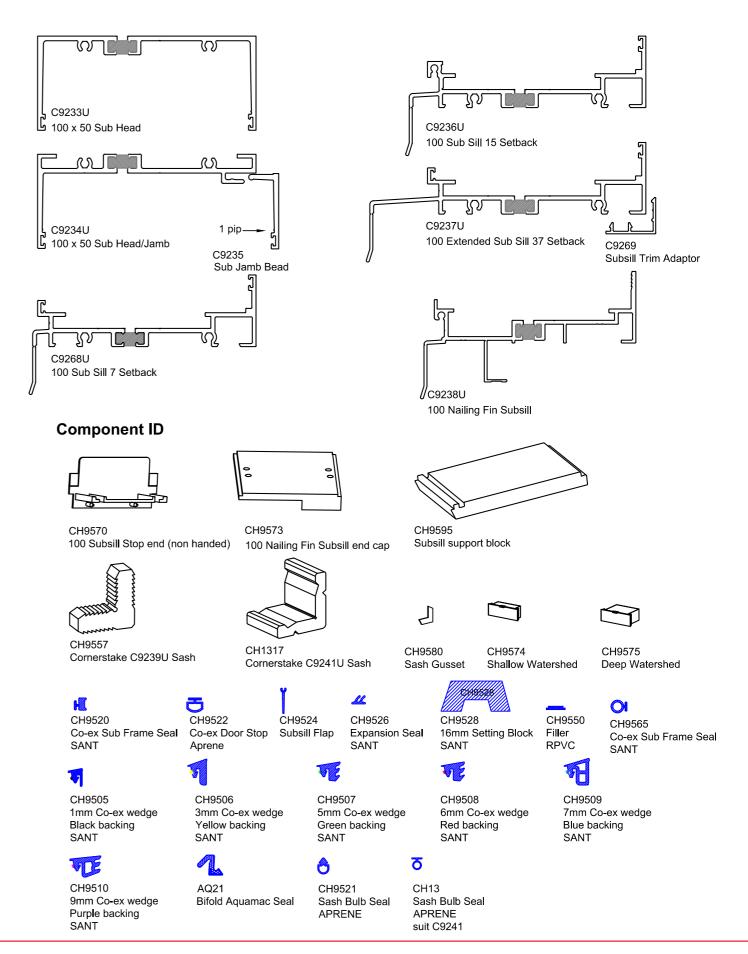
23



#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket U-Max Framing Systems: U100CDG - 3

#### **Extrusion ID**



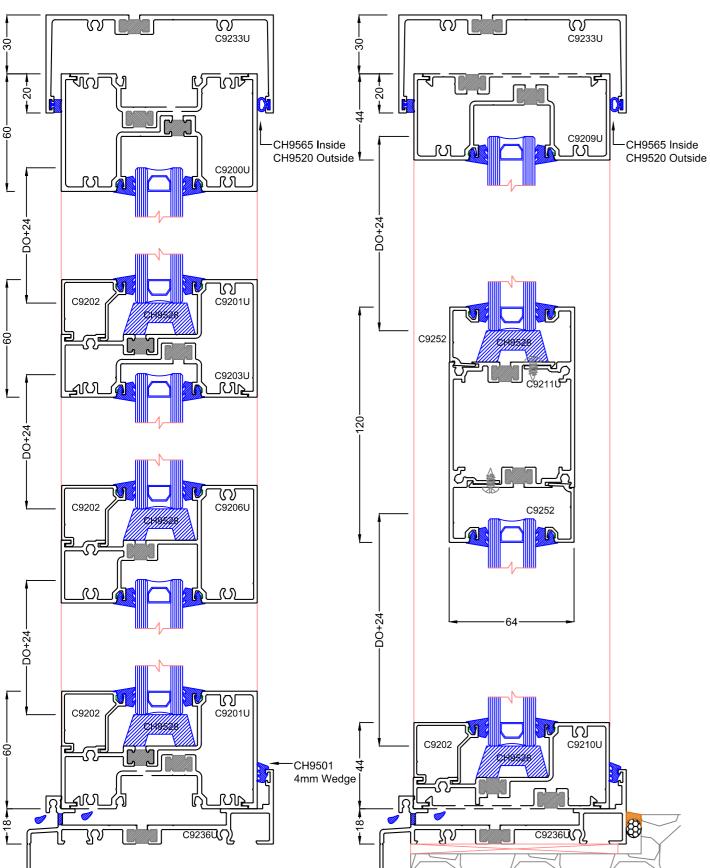




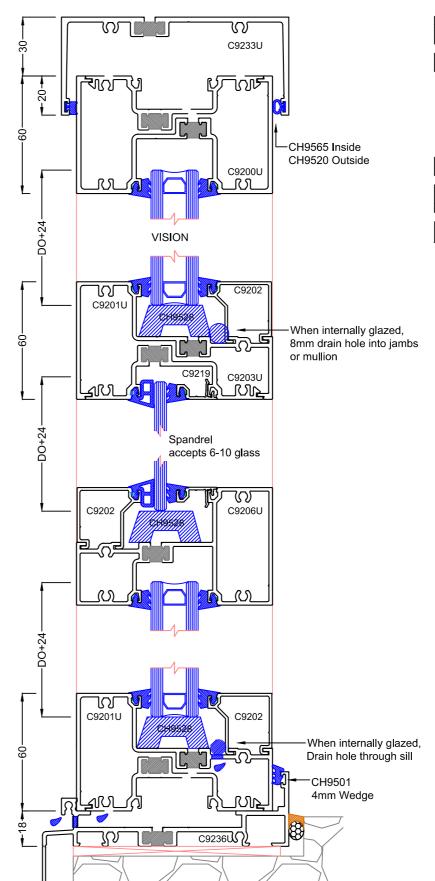
# U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket

# U-Max Framing Systems: U100CDG - 4 60mm Head & Sill

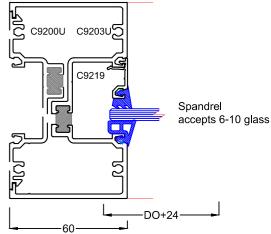
#### 44mm Head & Sill & 120 midrail



#### 60mm Head & Sill - Single glazed Spandrel

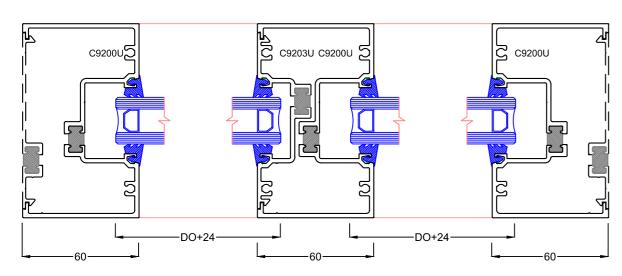


#### 60mm Jamb with Spandrel Adaptor

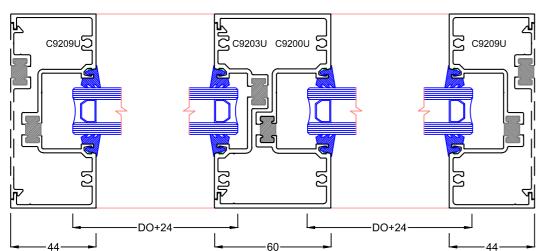




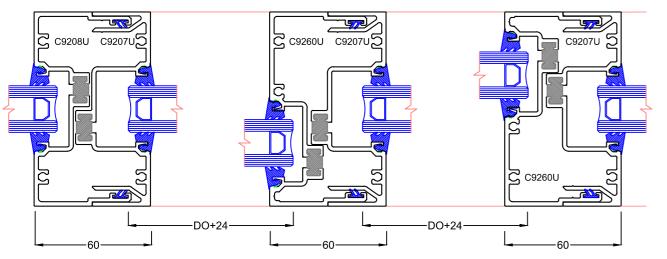
60mm Jamb Standard Mullion



#### 44mm Jamb Standard Mullion



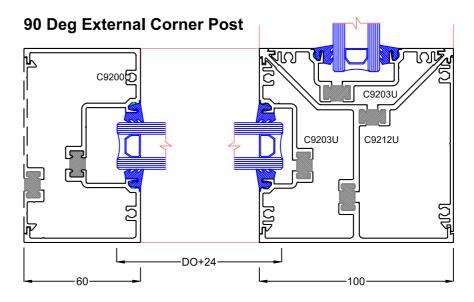
#### Standard Split Mullion Centre/Front Mullion Centre/Front Reversed

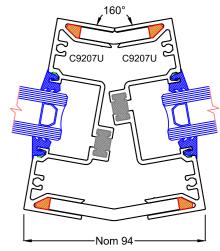


# 3 Way Corner Post C9200 Gen Single Glazed to couple internal wall internal wall DO+24 DO+24 DO+24

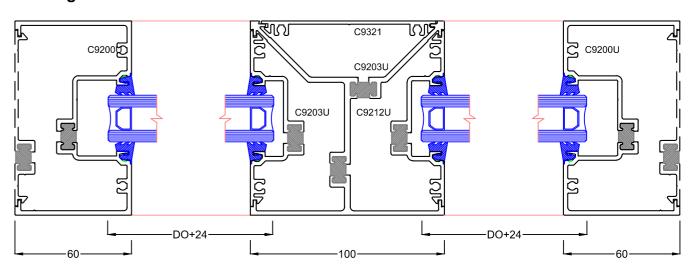
#### Splayed corner

6mm folded aluminium plate sleeved inside mullion, siliconed into place. Angles less than 160' would require mullions to be spread further apart.





#### **180 Degree Post**



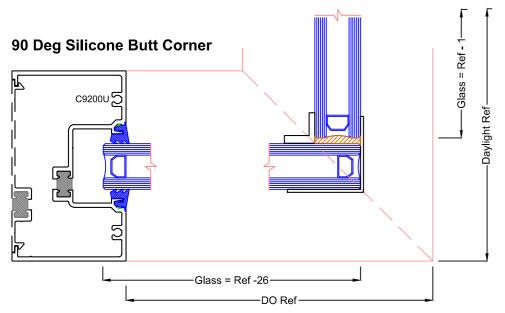
26



#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket U-Max Framing Systems: U100CDG - 6

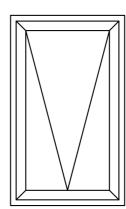
# 90 Deg Silicone Butt Corner C9200U 5 -Glass = Ref - 26 -Daylight Ref-External glass extends 27 past inner

Silicone butt corners can be done several ways & may not always be aesthetically pleasing as the corner can exhibit a wide black line in the corner from the line of silicone or IGU spacer



Alternative corner detail depicting aluminium angles both sides to mask the silicone butt. External 40 x 40 x 1.6 angle Internal angle (shown) 16 x 16 x 3 or 12 x 12 x 1.6

#### **Inset Awning Sash**

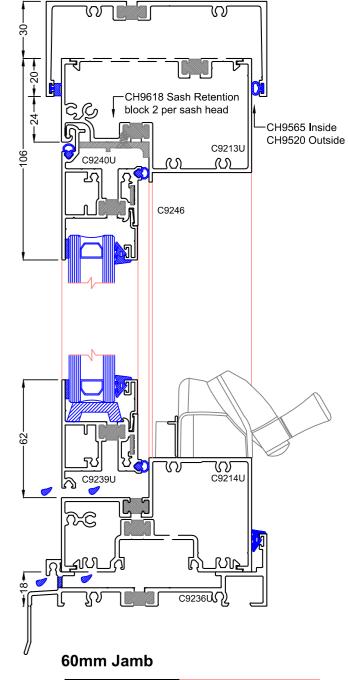


Maximum Sash weights generally are 30kg for a single chain winder & 70kg for a dual chain winder & 70kg with stays.

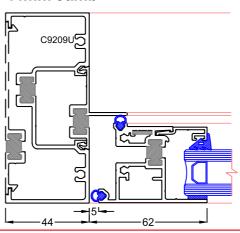
- Max Sash Height: 1600mm Min Sash Width: 450mm
- Max Sash Width: 1200mm
- Glass: 6mm 28mm

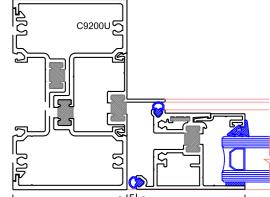
Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

#### 60mm Hinge Head & Winder Sill



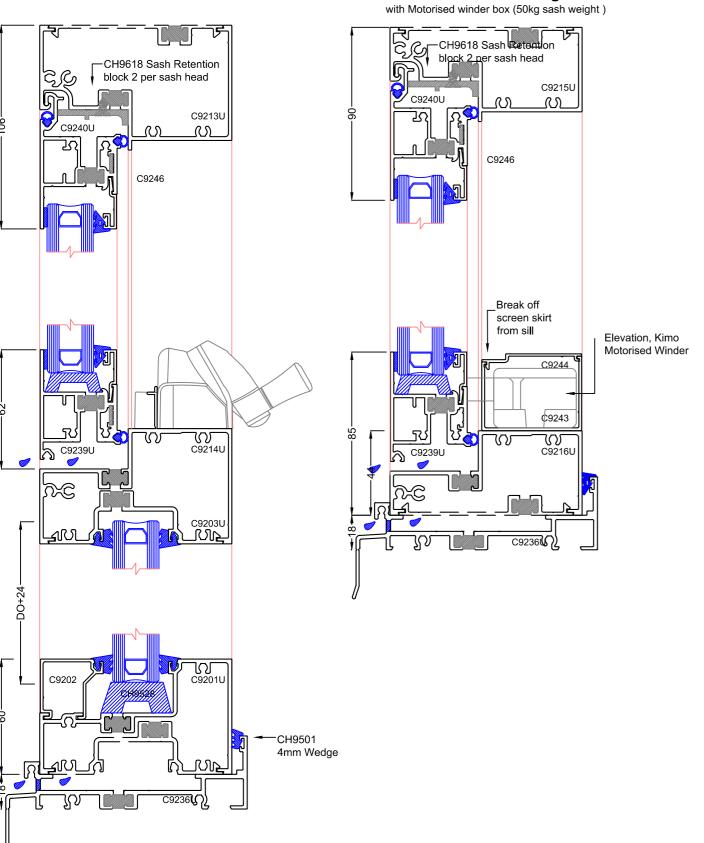
#### 44mm Jamb



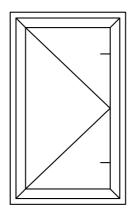




Inset Sash - 60mm Hinge Head, Winder Transom Alternative 44mm Hinge Head & Winder Sill



#### **Inset Casement Sash**

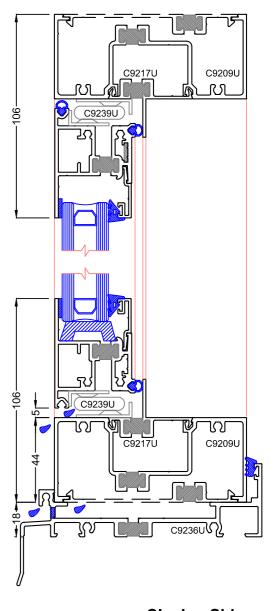


Left Hand sash depicted Maximum sash weights generally are 30kg, limited by the hardware.

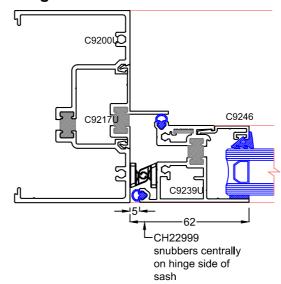
- Maximum sash width is 900mm.
- Glass 6mm 28mm

Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

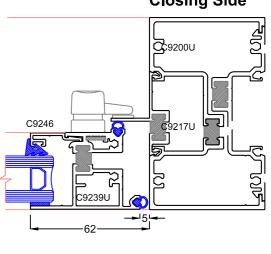
#### 44mm Head & Sill



#### Hinge Side

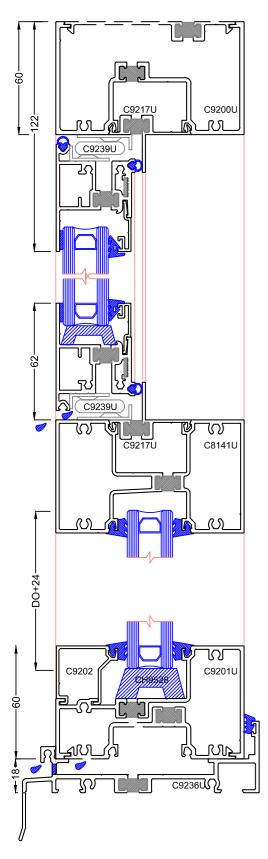


#### **Closing Side**

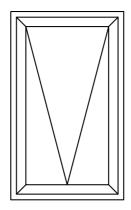




#### Inset Casement Sash with 60mm Head & Sill



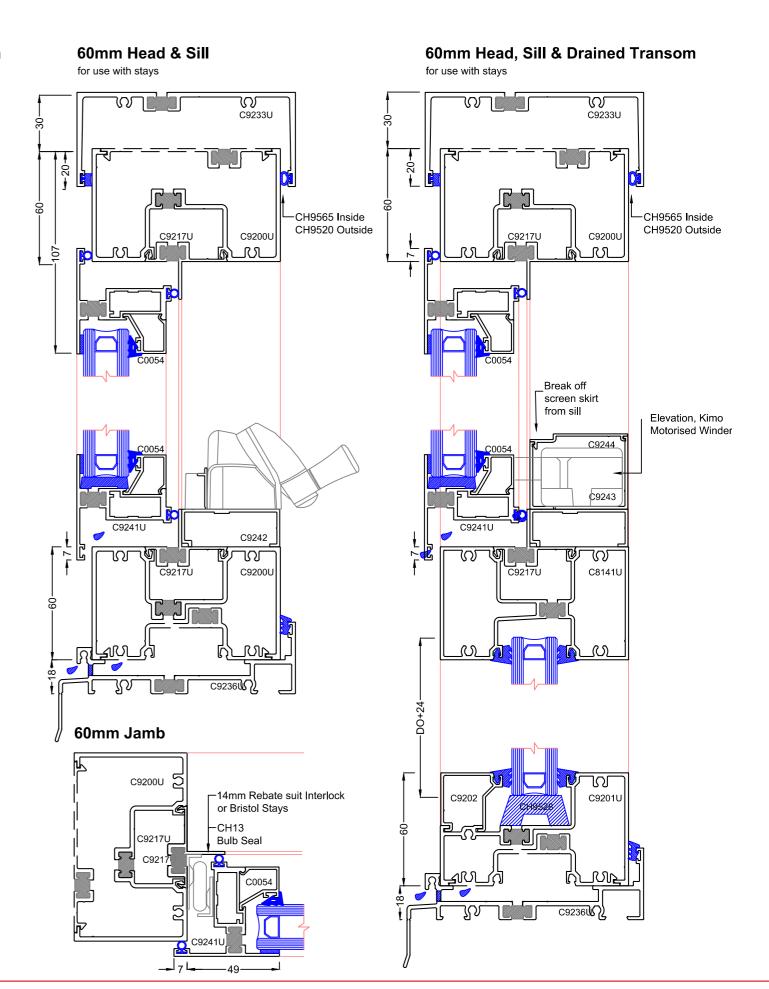
#### 46mm Overlap Awning Sash



The Overlap Sash depicted requires awning stays but also elegantly suits the hinge head & winder sill for a lower profile appearance. Maximum Sash weights generally are 30kg for a single chain winder & 70kg for a dual chain winder & 70kg with stays.

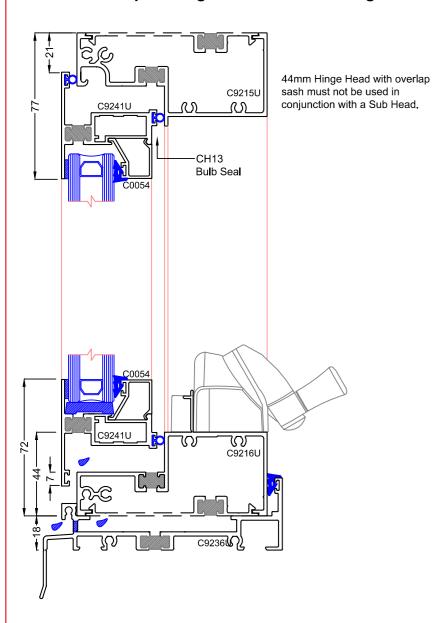
- Max Sash Height: 1600mmMin Sash Width: 450mm
- Max Sash Width: 1200mm
- Iviax Sash vvidin: 1200mm
- Glass: 6mm 35mm

Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

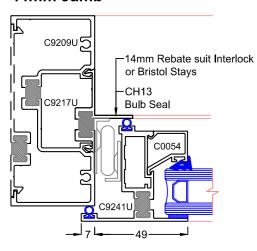




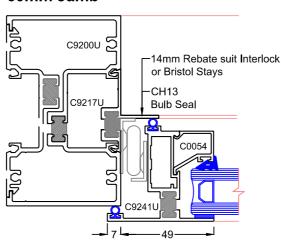
46mm Overlap Awning Sash with 44mm Hinge Head & Winder Sill



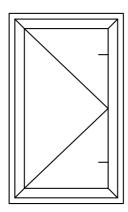
#### 44mm Jamb



#### 60mm Jamb



#### 46mm Overlap Casement Sash

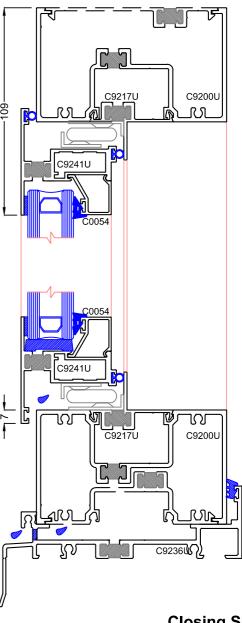


Left Hand sash depicted Maximum sash weights generally are 30kg, limited by the hardware.

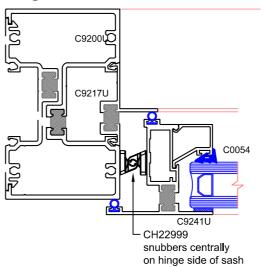
- Maximum sash width is 900mm.
- Glass 6mm 35mm

Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

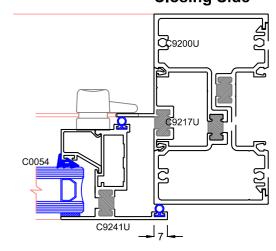
#### 60mm Head & Sill



#### Hinge Side

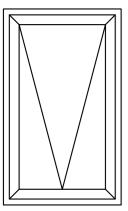


#### **Closing Side**





#### **Truth Awning Sash**



Maximum sash weights generally up to 100kg, limited by the hardware.

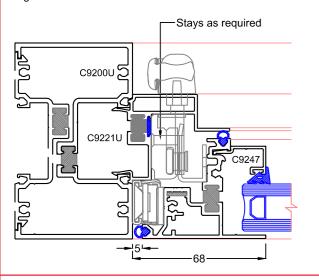
- Sash width dependant on sash height
- Multi-lock should be used on sashes
- over 1600mm high.

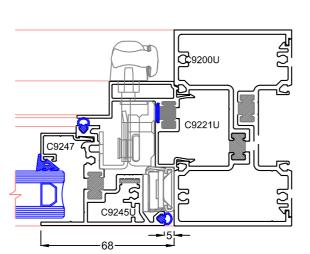
Maximum sash height 2100mm

Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

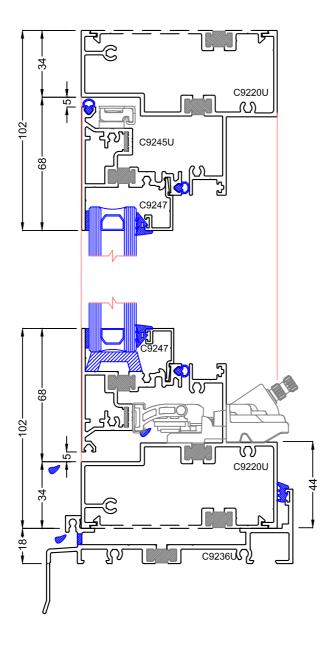
#### **Multi Locking Handle**

Required on sashes over 1600mm high & fitted both sides

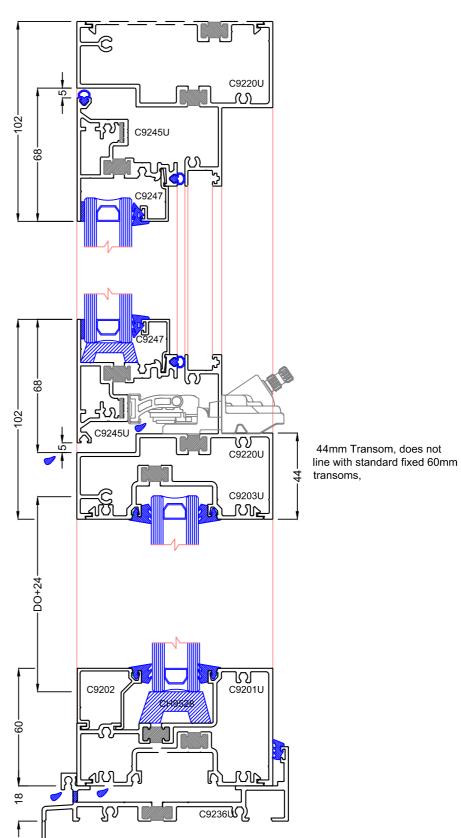




#### 44mm Head & Sill

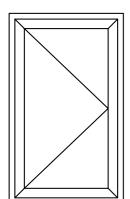


#### **Truth Transom Awning Sash**





#### **Truth Casement Sash**



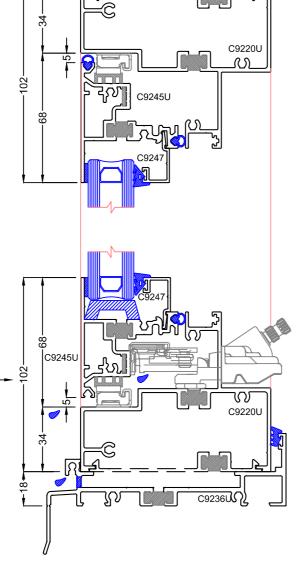
Left Hand sash depicted Maximum sash weights generally are 50kg, limited by the hardware.

- Maximum sash width is 1050mm. Multi-point lock should be used on
- sashes over 1600mm high.
- Glass 6mm 38mm

Please refer the Sashes segment in

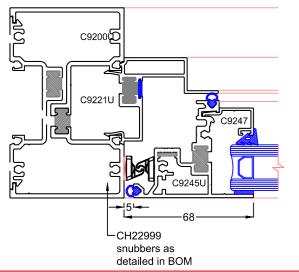
the catalogue for further information on sash limits & hardware selection.

23613 packer on top

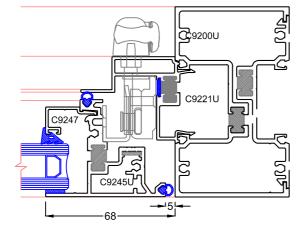


44mm Head & Sill

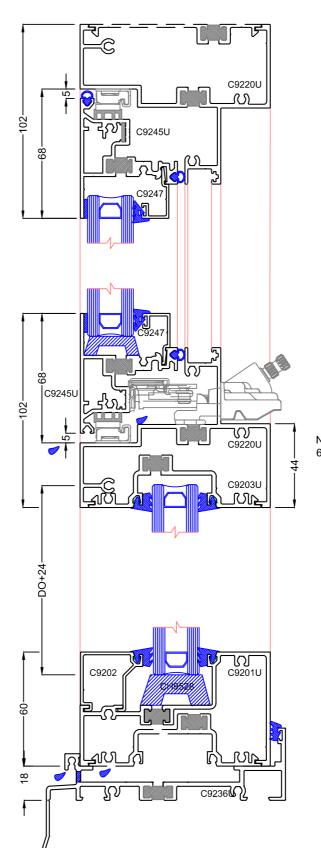
#### Hinge Side



#### Closing Side with multi lock



#### **Truth Transom Casement Sash**



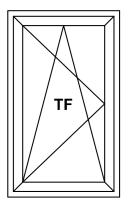
Note transom depth differs from 60mm fixed transoms.



#### Tilt & Turn Sash (Tilt First)

#### 44mm Head & Sill

44mm Frame shown for clarity, C9200U 60mm frame can also be used



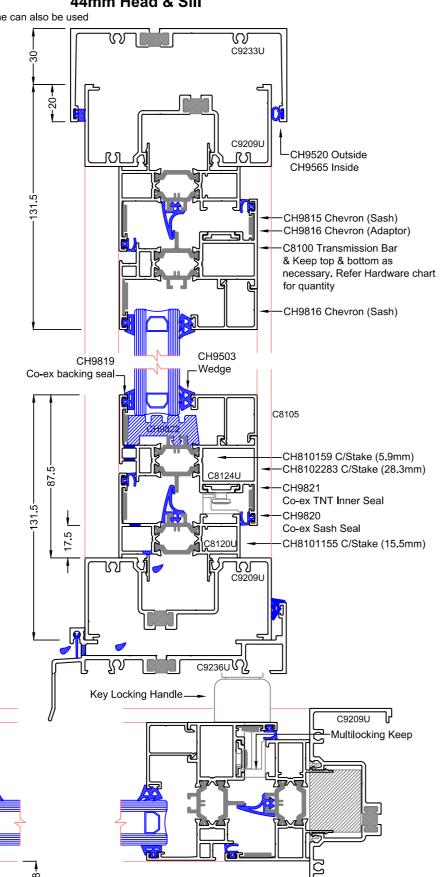
- Maximum Sash weights generally are 130kg with concealed hardware. Refer Hardware specification
- Heavier hardware options are available
- Handle Operated key locking
- Initial tilt in, then key override to hinge as standard function
- Sash height must exceed Sash width - a tilt only solution may allow this.
- Min Sash Height: 555 (590 daylight opening) Min Sash Width: 500 (590 daylight opening)
- Max Sash Width: 1300 (1335 daylight opening)
- 150kg sash weight
- Generally suited to 24-38mm IGU Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

-CH9675 Watershed fully sealed into pocket

-Concealed Hinge

(transoms only)

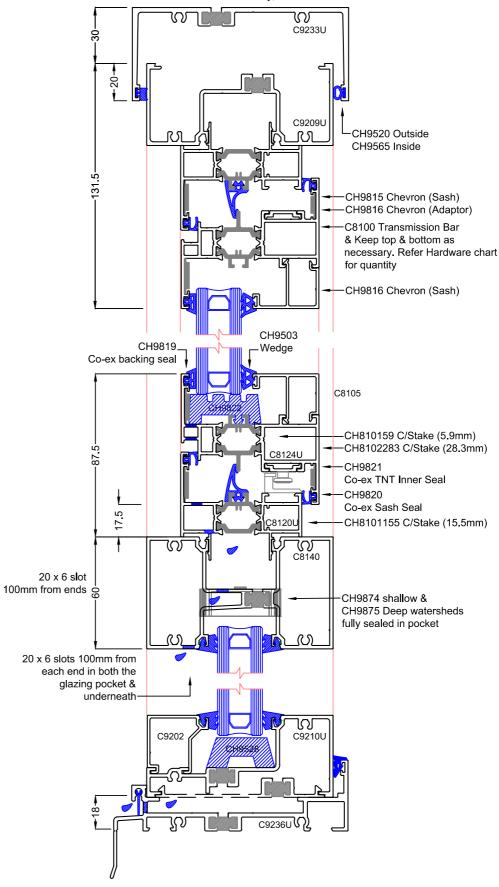
-89.5



131.5

#### Tilt & Turn Sash with drained transom

44mm Frame shown for clarity, C9200U 60mm frame can also be used

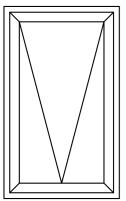




#### **Multi Locking Awning Sash**

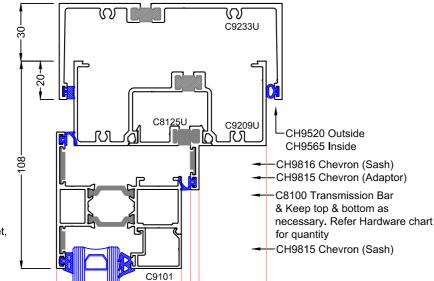
#### 44mm Head & Sill

44mm Frame shown for clarity, C9200U 60mm frame can also be used

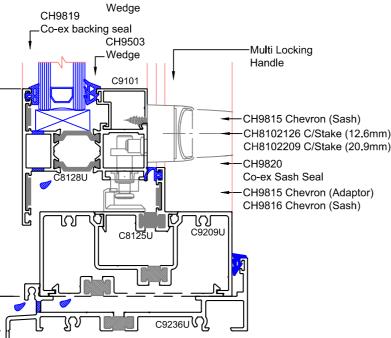


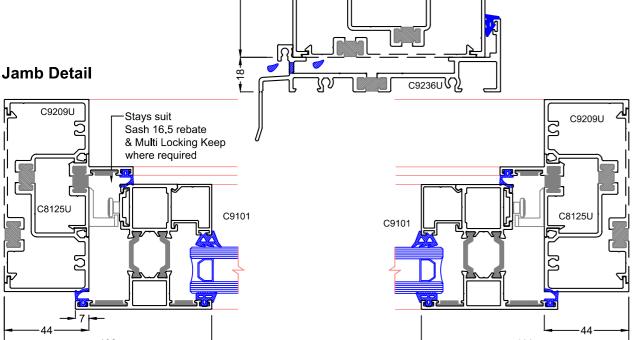
- Adapts to Max 100 Centre Glazed, 150 Offset, 100 & 150 Front Glazed
- Maximum Sash weights generally are 130kg. Refer Hardware specification
- Handle Operated key locking & multi locking
- Not recommended for use with winders
- Max Height 2100mm
- Max width 1200mm
- Generally suited to 24-40mm IGU Please refer the Sashes segment in

the catalogue for further information on sash limits & hardware selection.



CH9503





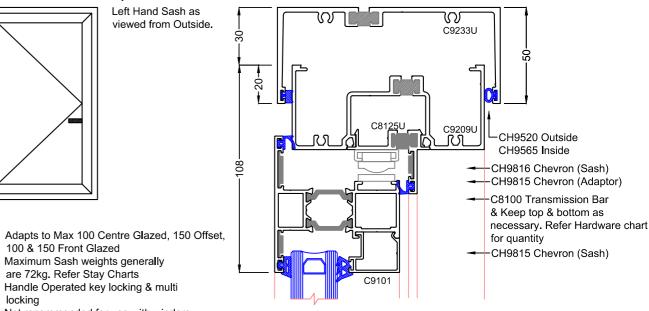
#### **Multi Locking Casement Sash** 44mm Head & Sill 44mm Frame shown for clarity, C9200U 60mm frame can also be used

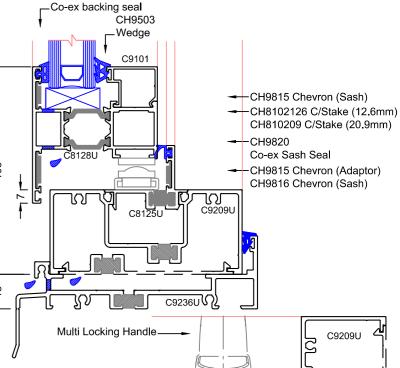
Left Hand Sash as

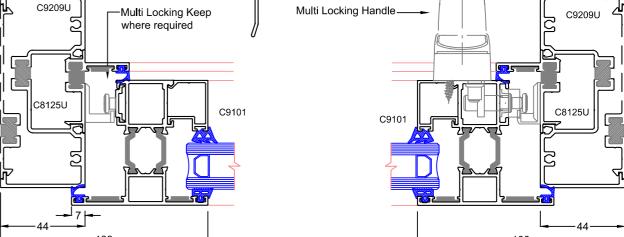
- 100 & 150 Front Glazed Maximum Sash weights generally
- are 72kg. Refer Stay Charts Handle Operated key locking & multi
- locking Not recommended for use with winders
- Max Sash Height: 2400mm
- Max Sash Width: 900mm Minimum Sash Width: 450mm
- Generally suited to 24-28mm IGU

Please refer the Sashes segment in the catalogue for further information on sash limits & hardware selection.

**Jamb Detail** 







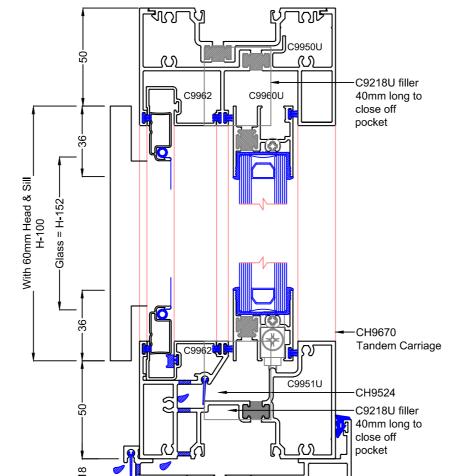
CH9819

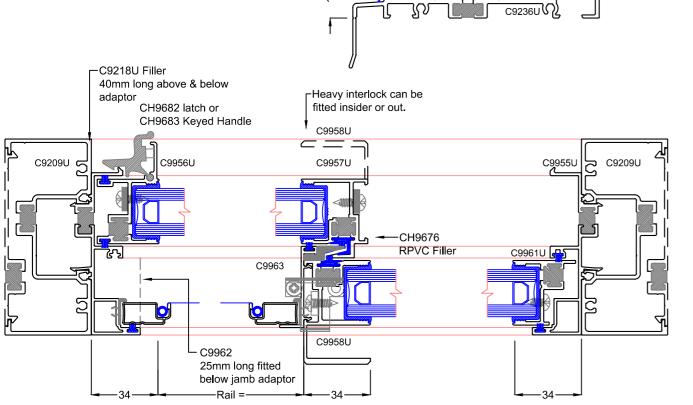


#### **U-Max Sliding Window**

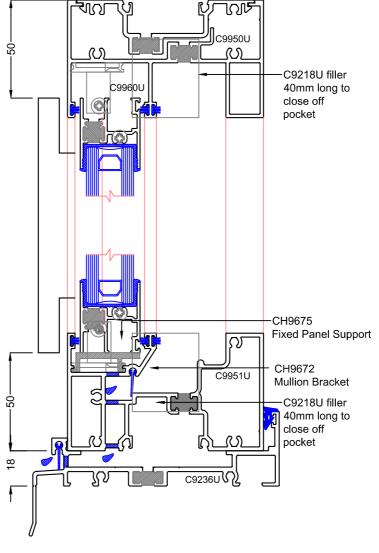
- Compatible with U-Max 100 Centre Glaze
- Non key handle as standard
- Maximum Sash weights 60kg
- Max Sash Height 1800mm Max Sash width 1500mm
- Generally suited to 20-24mm IGU

#### **Section through Sliding Panel**



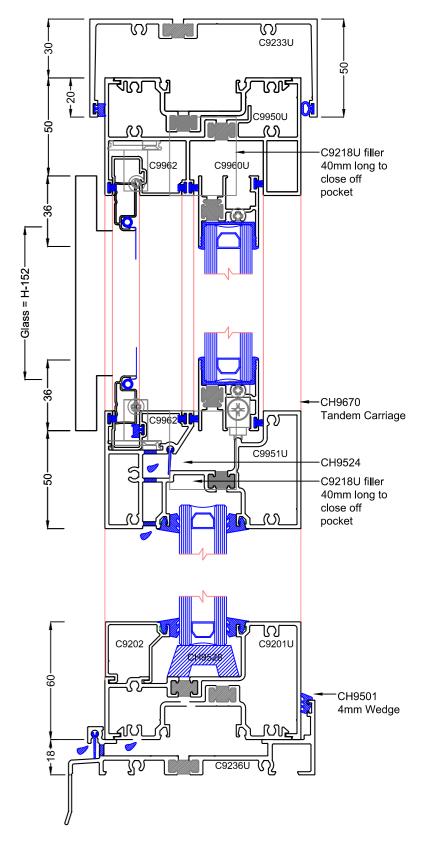


#### **Section through Fixed Panel**



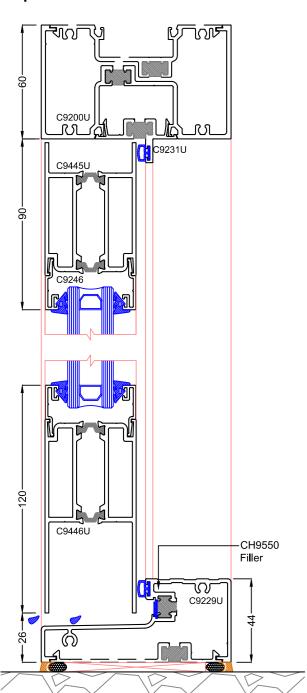
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#### **Transom Sliding Window**

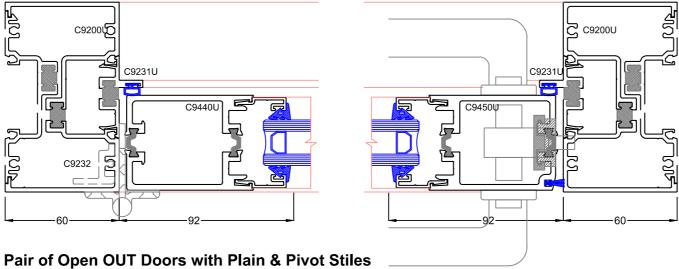




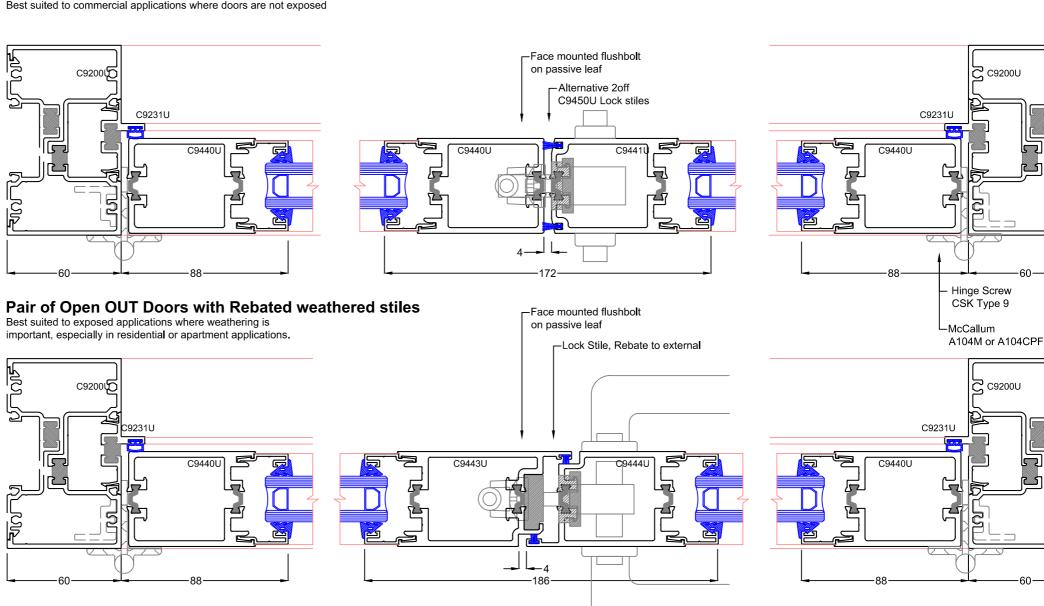
#### **Open OUT Door**



#### **Left Hand Open OUT**



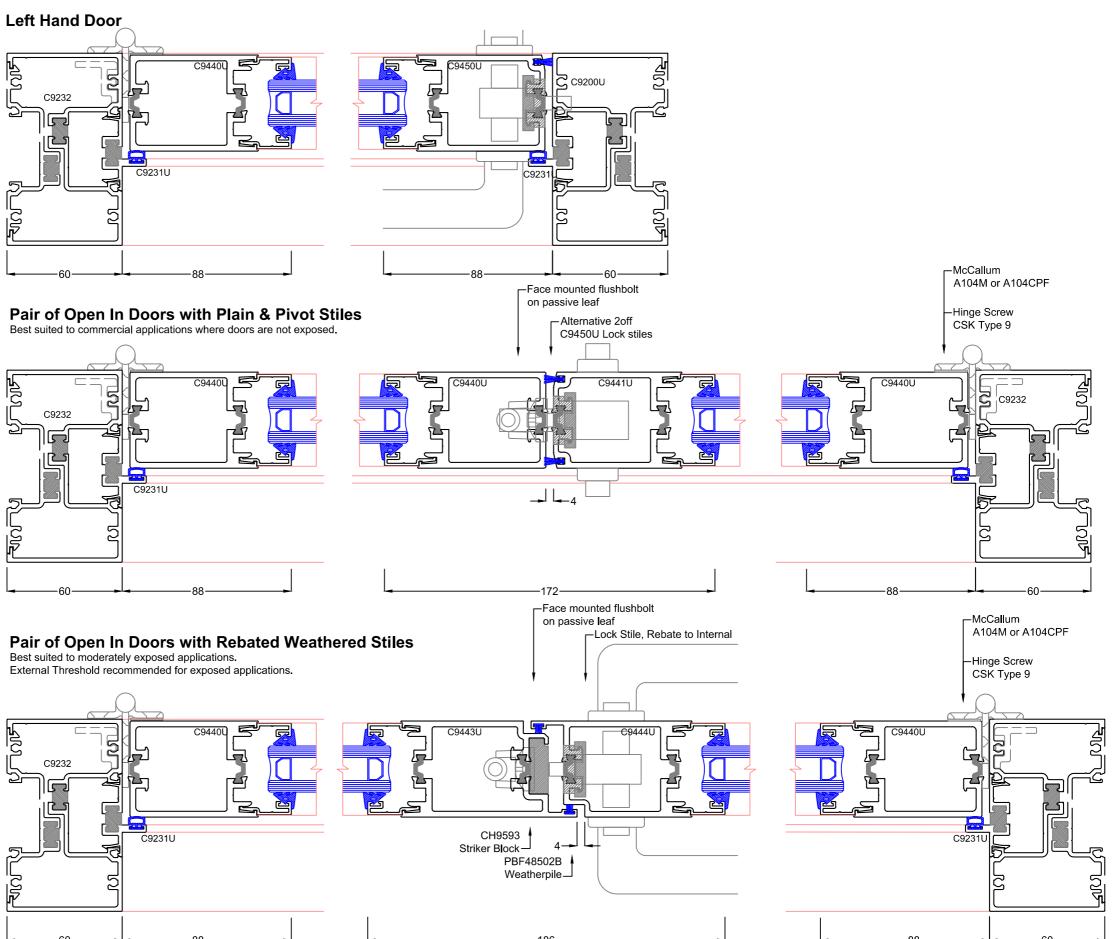
#### Best suited to commercial applications where doors are not exposed



്ದ c9200∪



**Hinged Door Open IN** C9231 -CH9525 Sill Flap -CH9550 C9236

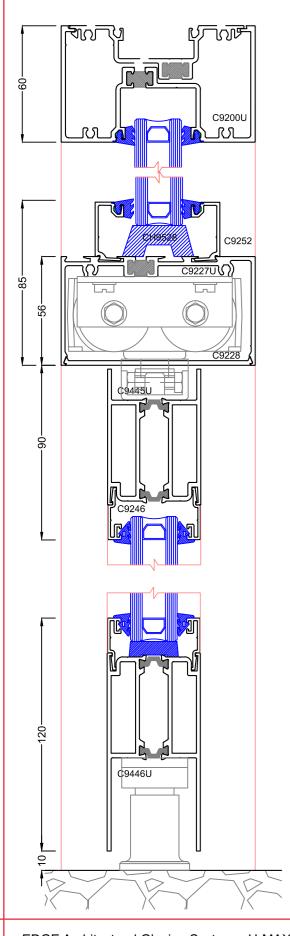




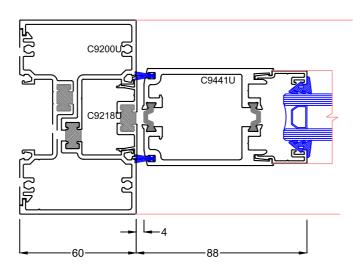
#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket

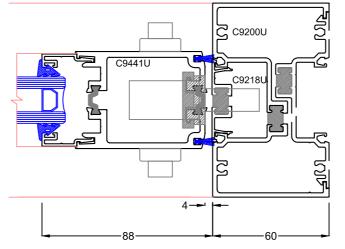
#### U-Max Framing Systems: U100CDG - 17

#### **Pivot Doors**



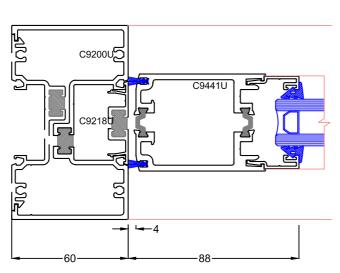
#### **Left Hand Pivot Door**

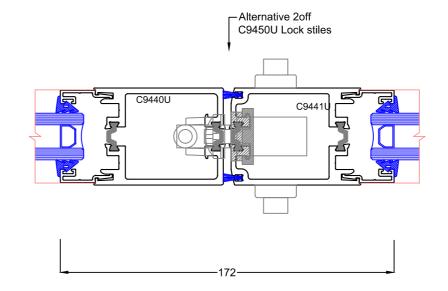


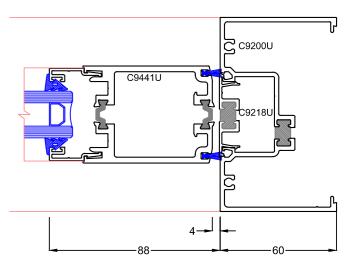


#### Pair of Pivot Doors with Plain & Pivot Stiles

Best suited to commercial public access applications where doors are not exposed & weathering is not a priority as these doors cannot use a weathered threshold.



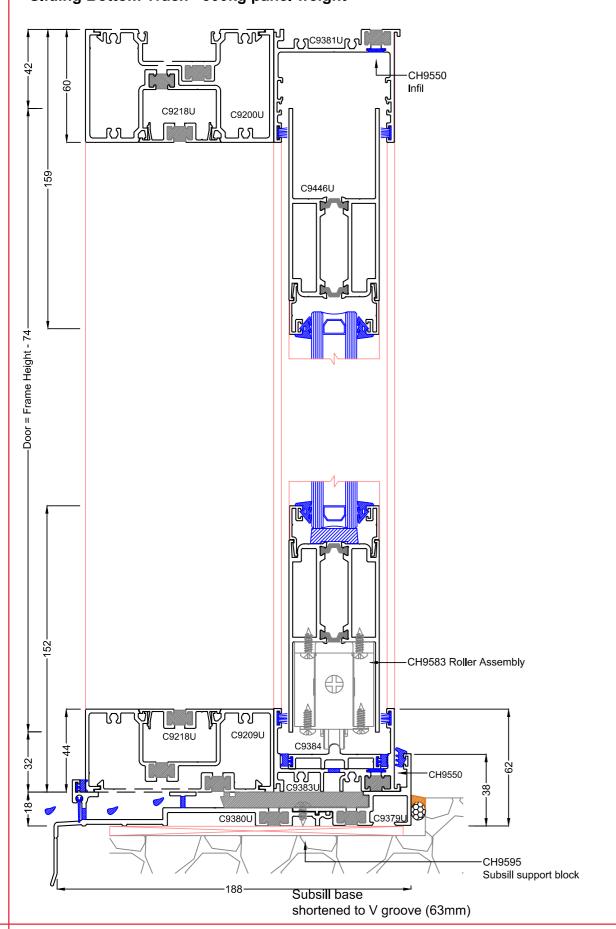




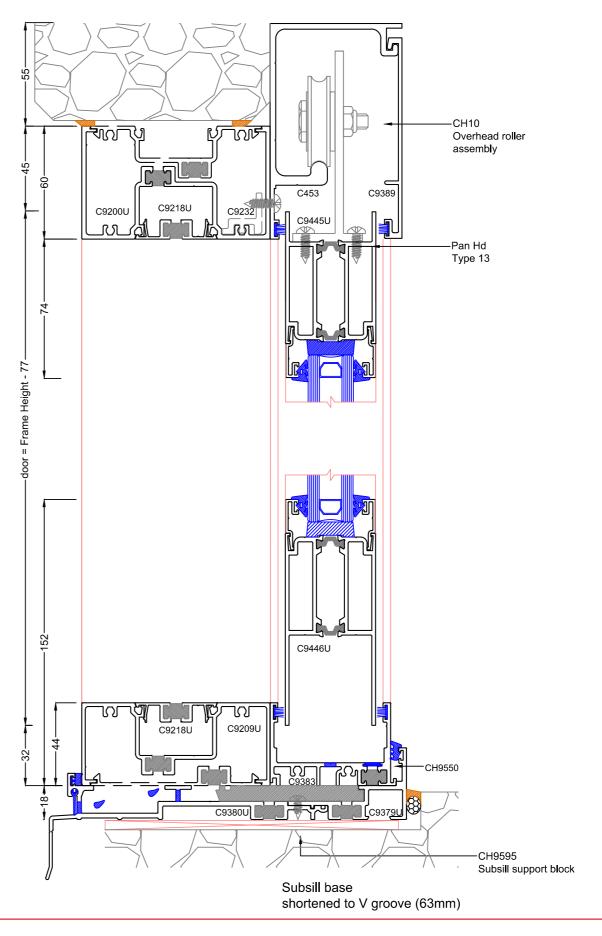
38



#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket U-Max Framing Systems: U100CDG - 18 Sliding Bottom Track - 300kg panel weight

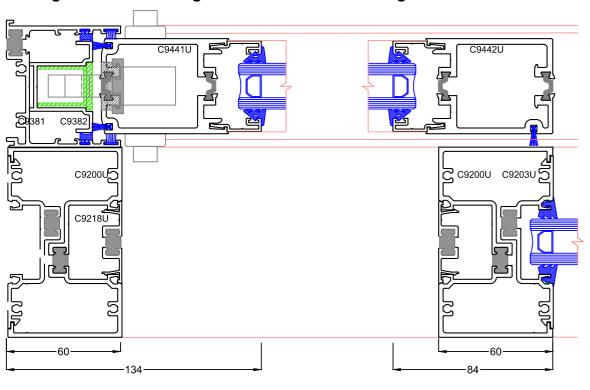


#### Overhead Sliding Track - 250kg Panel Weight



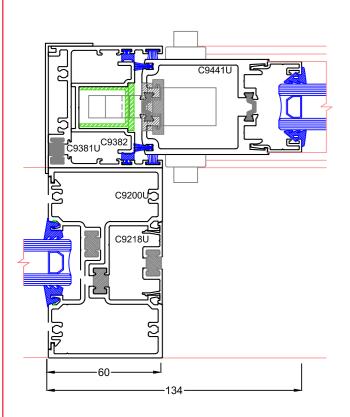


Sliding Door with Closing Jamb in 100 Fixed framing

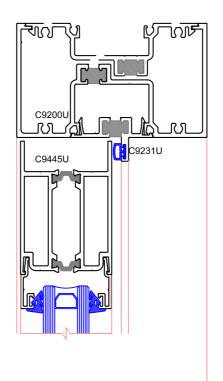


#### Sliding Door closing to mullion.

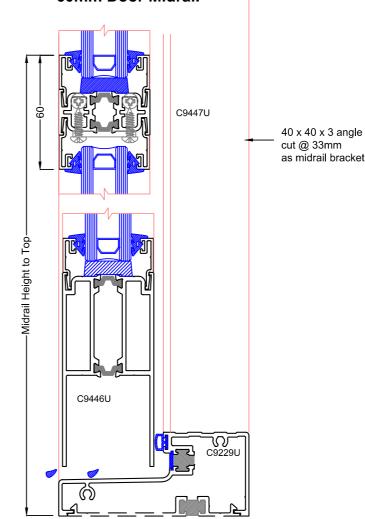
70 x 25 x 1.5 angle laid across back for aesthetics. Note that C9381U is shown (thermally broken), technically it does not require it in this situation as the channel is already inside the thermal break line of the frame.



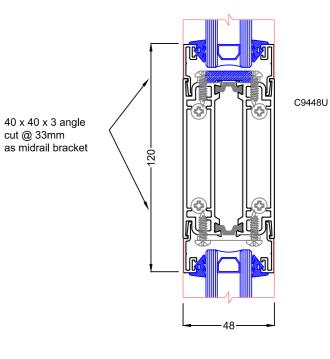
#### **Door Midrail Options**



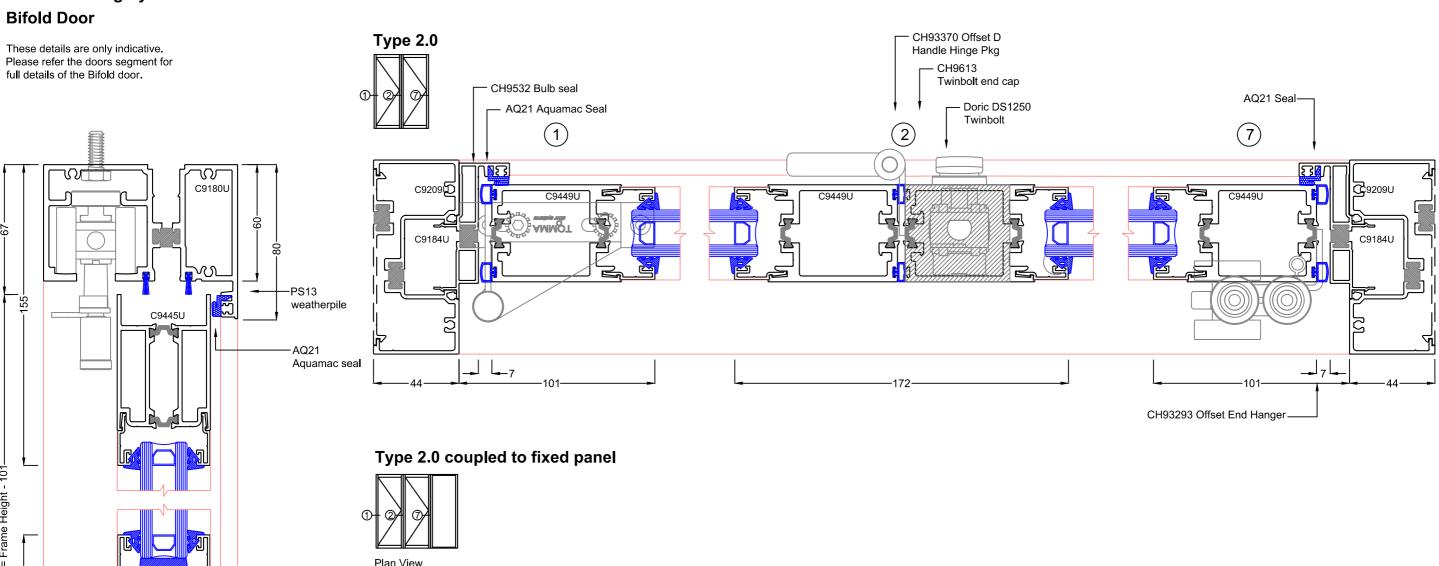
#### **60mm Door Midrail**



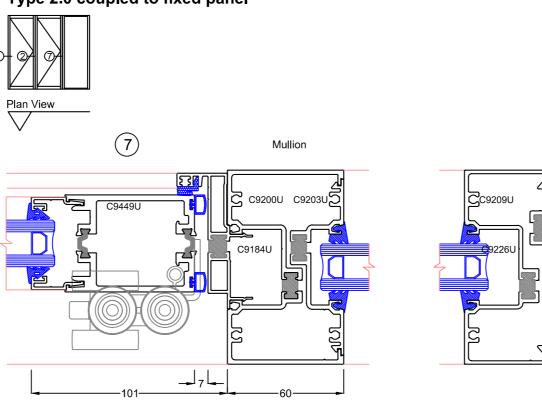
#### **120mm Door Midrail**







# 62 —



C9446U

154

C080

C9181U

CH9595

Subsill support block to support sill



#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket

U-Max Framing Systems: U100CDG - 21 **XO Sliding Door U-Max 100mm XO Sliding Door XO Sliding Door Highlight** CH9589 door stop -CH9640, CH9641 & - CH9646 Backing Plate Lockwood SP3640 CH9646 Backing Plate -CH9519 CH9553 for panel assembly & Interlock Seal separator mortice lock packer C9397U C9357 C9201U C9350U Fully seal joint CH9588 bracket fixed below filler C9350U C9350U C9355 C9361U C9397U M lkr Rail = W/2-160-CH9551 RPVC -Threshold = W/2-90-| Weatherpile holder C9362U C9367U ·C9368U splice, in rails W = Frame Width for panels over 1500 100mm XO Sliding Door coupled to mullion Fxd Adp = H-104 This is a typical detail for highlights when Jambs and Mullions run continuously. It is also an alternative way to make a standard XO door -CH9646 using C9349U receiver channel Backing Plate Glass = H-196 -CH9519 CH9589 Interlock Seal door stop C9349U ₹9209U C9397U C9203U C9200U \( \sigma \) C9349U CH9588 bracket fixed below fille PBF69554B weatherpile CH9588 Fxd Panel bracket C9361U C9397U C9349U 4mm wedge 100-CH9551 RPVC Weatherpile holder C9362U

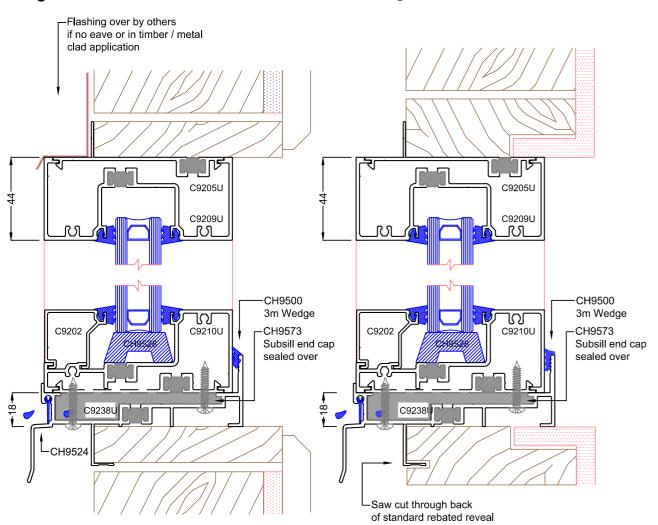
CH9596 Drain hole cover

-Fixed panel bracket

top & bottom



#### Nailing Fin Subsill & Filler with timber reveals Nailing Fin Subsill & Filler with rebated reveals



#### Jamb detail showing conventional architrave

& end of end cap

#### Architrave **Plaster** Square set Plaster 3mm wedge or Continuous 3mm wedge or Continuous seal across back of subsill seal across back of subsill C9209U C9209U C9205W 4 C9205U 1. Butter up end of jamb & bed onto end cap 2. caulk behind jamb as shaded CH9573 end 3. Seal joint between flat filler & jamb 100mm up & completely seal below filler

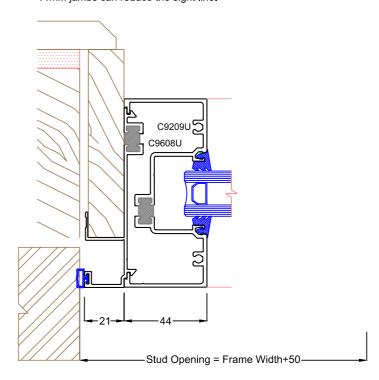
Jamb detail showing rebated

reveal & square set plaster

#### C9608U In-Line reveal adaptor

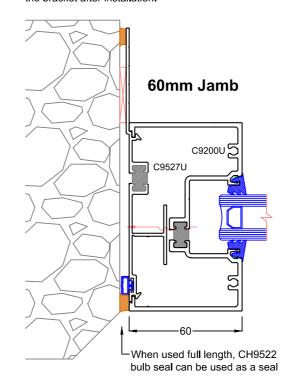
Replacing existing timber windows, or in new construction, fitting into a daylight opening (like cavity brick or precast ), when revealling an in-line reveal adaptor eliminates the need to angle trim the opening externally, creating a neater overall appearance. This can also be used with all 100 framing systems.

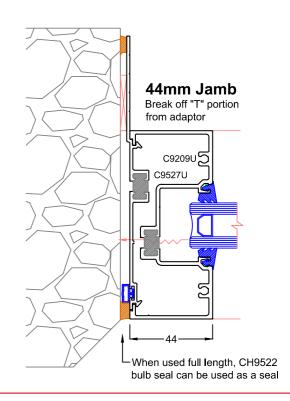
44mm jambs can reduce the sight line.



#### C9527U Build In Bracket

Can be used full length or in nom 100mm segments @ 450 centres & adjacent to transoms. This bracket enables fixings at the back of the frame where an internal finish (plaster / lining ) conceals the bracket after installation.

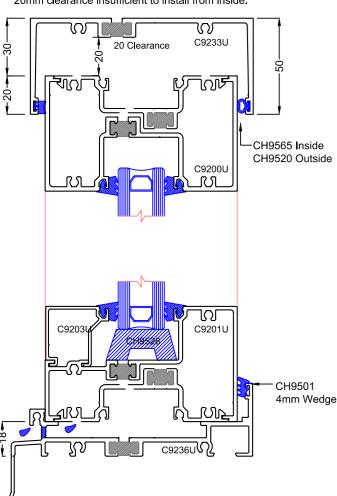






#### One Piece Sub Head (50 deep)

20mm clearance insufficient to install from inside.



#### The use of Sub frames & subsills

Commercial window systems are designed for drainage through the system. Horizontal members act as "gutters", collecting water & allowing it to flow to Vertical members which act as "downpipes".

It then becomes mandatory to adequately flash frames at the sill - this can be done via a folded flashing, impervious rebate, but usually by the use of a subsill.

The subsill allows easy preparation of an opening& ready access to subsill fixings so they can be appropriately sealed prior to frame installation.

A subsill is fitted with a stop end which is sealed during installation of the subsill & contains water within the subsill.

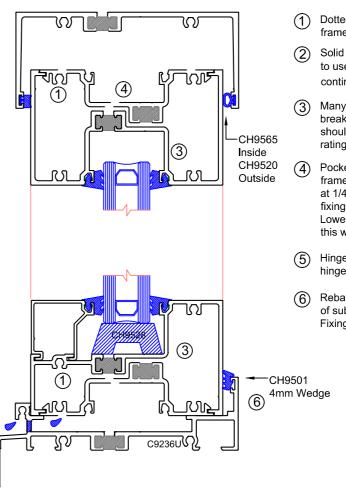
Without this, water would run to the ends of the subsill & leak back into the building.

Sub heads are used to allow for either vertical movement or as a more efficient means of installation, especially in above ground installations where it might be desirable to install frames from inside.

Sub frames likewise can be used in this situation, but are especially needed in ventilated cavities (like cavity brick) where there is airflow that may allow water to be driven over subsill stop ends, or it is difficult to contain water within a window opening.

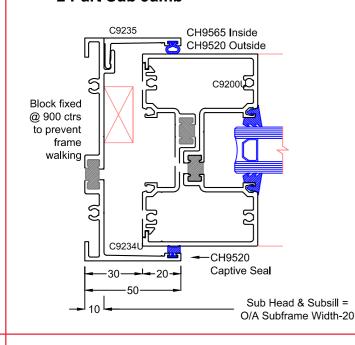
It must be remembered that all window installations require a continuous internal seal especially & the use of subsills & subframes are especially useful in achieving this.

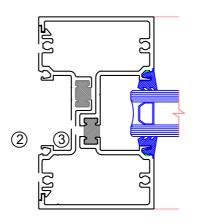
#### **Principles adopted in General Arrangement Drawings**

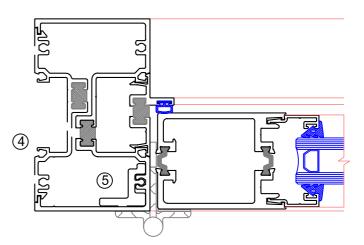


- ① Dotted lines represent typically 100mm long pieces to brace outer frame members or as backings for fixings
- Solid lines represent continuous extrusions. Jambs are recommended to use continuous fillers to maintain frame tolerances& to allow continuous caulk lines.
- Many extrusions are generally symmetrical, however the thermal break cavity is offset to the pocket. Where possible these extrusions should have the cavity on the outer side. This achieves better energy ratings.
- Pocketed fillers preferred for support behind jambs, especially on door frames, on heads within a subhead, to stop potential water tracking& at 1/4 points on sill profiles to support the sill from weight of glass& fivings
  - Lower profile sills & heads however require a flat filler & are depicted this way on drawings.
- Hinge backing plates should be used in 200mm segments to support hinges & door tracks where applicable
- Rebate details are typical only & indicate internal seals against the back of subsills to exclude air & water entry beyond the back of frames, subsill. Fixing methods vary considerably & are not detailed.

#### 2 Part Sub Jamb



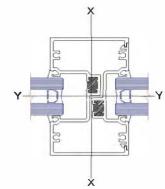






# U-Max<sup>™</sup> THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket U-Max Framing Systems: U100CDG - 24 Mullion Structural Tables

Mullion Combination: U-Max 100 STD CDG C9200, C9203



These tables use theoretical section properties. The resulting Serviceability and Ultimate should be read in conjunction with the requirements of AS1170.

Note the following:

- Maximum Stress = 110Mpa
- Serviceability based on Span/250
- Italics indicate where Serviceability is limited by Ulltimate.

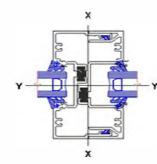
This chart is to be used as a guide only. Where Serviceability exceeds 3kPa or for more information, contact Capral.

2200	s	2480	2046	1771	1590	1470	1393	1349	1335
	U	3838	3152	2715	2424	2227	2099	2026	2001
2400	S	1894	1554	1337	1191	1090	1022	977	951
	U	3193	2611	2236	1982	1805	1682	1600	1553
2600	S	1479	1210	1036	917	833	774	733	705
	U	2698	2199	1875	1653	1495	1382	130\2	1248
2800	s	1178	960	819	722	652	602		
	U	2310	1877	1596	1401	1261	1158		
3000	S	954	776	659					
	U	2000	1622	1375					
3200	S	783	636						
	U	1748	1416						
3400	S	651							
	U	1541							
Mullion Centres (mm)		800	1000	1200	1400	1600	1800	2000	2200

#### **Mullion Structural Tables**

#### Mullion Combination: U-Max 100 Split CDG C9207, C9208

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These tables use theoretical section properties. The resulting Serviceability and Ultimate should be read in conjunction with the requirements of AS1170.

Note the following:

- Maximum Stress = 110Mpa
- Serviceability based on Span/250
- Italics indicate where Serviceability is limited by Ulltimate.

This chart is to be used as a guide only. Where Serviceability exceeds 3kPa or for more information, contact Capral.

Mullion Centres (mm)		800	1000	1200	1400	1600	1800	2000	2200
4000	U	1632							
3800	S	638							
	U	1819	1467						
3600	S	746	603						
	U	2039	1647	1389					
3400	S	879	711	601					
	U	2302	1861	1571	1368				
3200	S	1046	847	717	626				
	U	2617	2119	1792	1564	1398	1273		
3000	S	1258	1021	866	758	680	621		
	U	3001	2434	2063	1805	1618	1480	1376	1298
2800	S	1532	1246	1059	930	837	768	717	680
	U	3475	2825	2401	2107	1897	1743	1629	1548
2600	S	1892	1543	1316	1159	1048	967	908	867
	U	4070	3316	2828	2493	2255	2085	1964	1882
2400	S	2376	1943	1663	1473	1339	1243	1177	1133
	U	4829	3949	3382	2997	2730	2544	2420	2349
2200	S	3042	2497	2148	1913	1751	1641	1569	1528
	U	5822	4782	4119	3676	3378	3184	3073	3036
2200	S	3983	3286	2845	2554	2361	2237	2167	2145



#### U-Max™ THERMAL BREAK 100 x 60 CENTRE DOUBLE GLAZED - 34mm Pocket U-Max Framing Systems: U100CDG - 25 **Glazing Methodology**

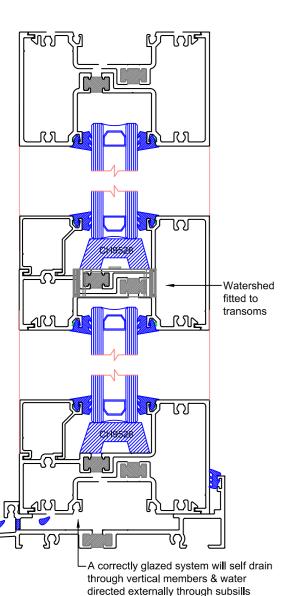
This system has been designed to self drain within the system via a patented watershed component in transom, which is traditionally the area most prone to leakage in commercial systems.

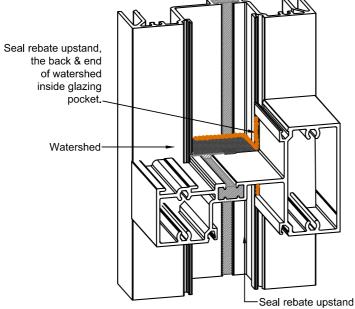
Most other commercial systems attempt to deal with drainage through ugly external drain slots or rely on silicone to stop water entry.

Using "top loaded" high performance co-extruded wedges which are shrink resistant, the system allows easy in-factory fitting of backing wedges& easy fitting of wedges on the side from which the system is being glazed.

Wedges are colour coded according to thickness for ease of identification, refer the chart below.

**This** page describes one method of glazing. Wet Glazing or combinations of wet and dry glazing can be done. For further information on Glazing methodology & frame sealing please refer the Information pages in the U-Max Manual.





#### **Preparing the Glazing Rebate:**

a. Ends of horizontal frame joints are end buttered prior to assembly.

b. Fit the watershed device while assembling transoms

- c. Seal into the captive groove on the transom's vertical rebate. This is done on top & below the transom.
- d. Seal the back & end of the watershed within the pocket. DO NOT seal in front of Watershed as infiltrated water is drained through here.

Backing Wedge (rebate size) Fitting method:

Backing wedges can be fitted either side dependant on which side it is being glazed: outside for internal glaze or inside for external glaze. The diagram depicted is externally glazed, so backing wedges would be factory fitted to the inside.

- Wedges size appropriate to glass thickness should be cut approx 18mm/metre oversize from DO (Daylight opening).
- Vertical wedges butt between horizontal wedges & are bunched towards corners.
- Pull corners back 50mm & bed into sealant& apply sealant to the

Site Preparation of the glazing rebate:

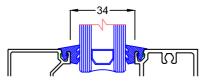
- Clean the glazing rebate & wipe glazing grooves
- Check the watershed devices are in place& overseal where
- Place setting blocks at 1/4 points. Setting blocks should be no closer than 150mm from the edge of glass in normal conditions.

Wedge Fitting method on the glazing side

- Wedges size appropriate to glass thickness should be cut approx 18mm/metre oversize from DO (Daylight opening).
- If glazing internally, repeat the method of sealing corners as per backing wedges.

#### Wedge glazing charts for U-Max Framing

when different wedges are used, the smaller wedge must go on the rebate side to allow room to fit the glazing bead





CH9505 Black backing

CH9506 1mm wedge SANT 3mm wedge SANT Yellow backing



CH9507 5mm wedge SANT Green backing

CH9508 6mn wedge SANT Red backing

7mm wedge SANT Blue backing

CH9510 9mm wedge SANT Purple backing

U-Max Framing	Glass thickness	Example	Rebate wedge	Gap	Glazing wedge	Gap
	22mm	5/12/5	CH9507	5mm	CH9509	7mm
	23mm	6/12/5	CH9507	5mm	CH9509	7mm
	24mm	6/12/6	CH9507	5mm	CH9507	5mm
	25mm 6.38/12/6		CH9507	4mm	CH9507	5mm
	26mm 8/12/6		CH9506	3mm	CH9507	5mm
	27mm	8.38/12/6	CH9506	3mm	CH9507	5mm
	28mm	8/12/8	CH9505	1mm	CH9507	5mm
	29mm	8/12/8	CH9505	1mm	CH9506	3mm
U-Max Spandrel Glazing	Glass thickness		Rebate wedge	Gap	Glazing wedge	Gap
	6mm		CH9506	5mm	CH9509	7mm
	8mm		CH9506	5mm	CH9507	5mm
	10mm		CH9503	3mm	CH9507	5mm
Sp						